

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 0285	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/B 02/05554	International filing date (day/month/year) 20.12.2002	Priority date (day/month/year) 29.11.2002
International Patent Classification (IPC) or both national classification and IPC A23L1/06		
Applicant COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 28.06.2004	Date of completion of this report 25.04.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Popa, M Telephone No. +49 89 2399-7829 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/B 02/05554**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-3 received on 12.04.2005 with letter of 08.04.2005

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
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International application No. PCT/IB 02/05554

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-4
	No: Claims	
Inventive step (IS)	Yes: Claims	1-4
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-4
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 02/05554

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: US-A-2 573 750 (WHITE J.W. JR.) 6 November 1951
- D2: GB 397 714 A (CALIFORNIA FRUIT GROWERS EXCHA) 31 August 1933
- D3: DE 32 36 762 A (WEIHOFEN JUERGEN DIPL OEC TROP) 5 April 1984
- D4: US-A-5 260 083 (BRAIN CHARLES H ET AL) 9 November 1993
- D5: FR-A-2 700 245 (SOCIÉTÉ INDUSTRIELLE ET AGRICOLE DE BRETAGNE)
13 July 1994
- D6: FR-A-2 638 064 (GUILLAMOT GILBERT) 27 April 1990

The amendments fulfil the requirements of Art. 34(2)(b) PCT. The additional features brought into claim 1 may be found in the description, for instance in p. 1 line 21.

The novelty of the independent claim 1 and subsequent has already been acknowledged in the previous communication.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document) a process in which honey is employed as a sweetener.

The subject-matter of claim 1 differs from this known process in that a sweetener is added to the product and some other process parameters.

The objective problem would be the production of a fruit spread that does not contain added sugars (sweeteners, edulcorants). D1 does not address the problem of producing fruit spreads that DO NOT contain edulcorants and, thus, it does not provide the necessary hints to the skilled person to achieve the invention, instead it teaches him away. This is the case for the rest of the documents that are further away from this solution.

The subject-matter of the new claim 1 involves an inventive step in the sense of Art. 33(3) PCT.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

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Claims 2 and 3 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VIII

Certain observations on the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D6 is not mentioned in the description, nor are these documents identified therein. As the examiner is not allowed to carry out any amendments, no matter what minor these may be (R. 66.8(a) PCT), it is the task of the applicant to acknowledge these documents in the description part.

* * *

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Claims:

1.A process for preparing a fruit spread, characterized in that the process does not employ a sugar, sweetener, pectin or gums and comprises the steps of:

- (i) preparing fruit pulp by crushing fruits,
- (ii) incubating the pulp with 0.75-1.25% pectolytic enzyme of enzyme activity 1590 units/ml of PolyGalactouronse and 17.7 units/gm of Pectin Methyl Esterase at 27-40°C for a period of 20-40 minutes to allow the pulp to liquefy thereby lowering the viscosity of the pulp by 60-80%;
- (iii) heating the enzyme treated pulp to inactivate the enzyme with mixing to attain a temperature of 65-75°C followed by immediate cooling at room temperature of 27-30°C and filtration through muslin cloth to obtain strained fruit juice;
- (iv) concentrating the strained fruit juice by employing vacuum evaporation using thin film evaporator at a temperature of 40-45°C with system pressure of vacuum 22-24 inches to obtain a fruit juice concentrate having total soluble solids of 70-72°Brix;
- (v) incubating the fruit juice concentrate with 0.75-1.25% pectolytic enzyme of enzyme activity - 1590 units/ml of Poly Galactouronse and 17.7 units/gm of Pectin Methyl Esterase at 27-40°C for a period of 20-40 minutes to reduce the viscosity of the fruit pulp by 30-50% and
- (vi) mixing 20 to 30% of the fruit juice concentrate with the fruit pulp of step (v) to obtain a mixture having total soluble solids content from 30-45°Brix, followed by boiling to obtain a fruit spread of 68-70°Brix.

(Art 34)

AMENDED SHEET

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2. A process as claimed in claim 1 wherein the fruits are selected from jack fruit, papaya, apple, banana, guava and *Zizyphus mauritiana* Lamk.

3.A process as claimed in claim 1 further comprising the step of subjecting the fruit juice concentrate of step (v) to vacuum concentration by using thin film evaporator at the temperature of 40-45°C with system pressure (vacuum 22-24 inches) to obtain high total soluble solids of 70-72 °Brix.

(Att 34)

AMENDED SHEET